Synopsis

On

Utilization of Postnatal Care Services in Tribal Villages of West Bengal: A Study of Santal Women

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Introduction

Maternal mortality and child mortality are major concerns for developing countries. This has been the propaganda ofmany nations in the past decades to look after the health aspects of the mother and the child. Children and women are the vulnerable section of any society. Several factors are known to be responsible for causing higher rates of child and maternal mortality. While many of the factors are related to health care services which are not avail by the population, several other factors are entwined in the socio-cultural fabric of the society. Mostly these factors vary with community with specific socio-economic and cultural characteristics. But nutritional status is known to be an important variable which is constant in any community setting as one of the causes for decreasing the quality of maternal and child health.

According to International Institute of Population Sciences and Macro International(2007),a quarter of world's neonatal deaths (one million) each year take place in India, mostly at home (65.4% of all births and 75.3% of births in rural areas). It may be noted that despite the great importance of the subject, no information is available regarding the details of the causes of deaths (International Institute for Population Sciences and ORC-Macro, 2001; Black RE, et. al. 2003; Freeman JV, et.al. 2005). It is believed that infectious diseases such as sepsis, pneumonia, tetanus, diarrhoea, preterm birth and complications of asphyxia may be responsible for most of these deaths in the neonatal period. It can be said that these diseases are frequent because of the lack of postnatal care of the mother and the child.

WHO (2010) defines postnatal as the period from one hour after the delivery of the placenta to six weeks after birth. It is a very critical phase of time for both the woman and the newborn physiologically, emotionally, and socially (MacArthur C, 2002). Globally almost 2.9 million babies die in the neonatal period (UNICEF, 2013). Though the child mortality has decreased in the past decades but there has been a very little development in the field of neonatal mortality. Reduction of neonatal mortality in between 1980 and 2000 was a 25% which was again less than the 33% reduction in the mortality rate of children aged two months to five years (UNICEF; 2013; Chopra M, et.al. 2012). According to previous studies the reach of postnatal care in low- and middle-income countries is lower than the upper-income countries (Dhakal S, et.al. 2007; Regassa N, 2011; Jat TR, 2011). WHO and the United Nations Children's Fund (UNICEF) guidelines recommend a postnatal care visit for the mother and her newborn on day 1, day 3, and day 7 after birth, with continuing contact throughout the first six weeks of life (Moran, et.al. 2013).

Postnatal care has been observed to be more cost effective than antenatal care in decreasing neonatal mortality (Darmstadt GL, et.al. 2005). Postnatal care interventions that focused on the identification and management of women's health problems also have shown to improve physiological and psychological health (MacArthur C, et.al. 2003; Xiong W, 2006; Wang SL, 2006). Cost effective strategies have been developed to scale-up these interventions in health systems in low and middle income countries (Darmstadt GL, et.al. 2005). A understanding

can be developed that a place with high level of IMR, MMR and low nutritional status of any indicates the lack of utilization of postnatal care services in that place.

According to the NFHS-3 and 4 data a much higher child and maternal mortality is prevalent in rural areas than in urban areas, and it is significantly high among the disadvantaged socio-economic groups. The nutritional status of children is a good indicator of the health status of a community. After assessing the growth and nutritional status of the children of various regions of the country (Chatterjee and Mondal, 1991; Agarwal et al., 1992), it has benn seen that the data on the nutritional status of under-five children from tribal communities is lacking (Bagchi, 1994) along with that, information in this regard related to the tribal is limited (Mitra et al., 2002; Bose and Chakraborti, 2005).

Many times the impact of the health intervention programs on the high neonatal mortality in India gets nullified because of the structural and cultural disadvantages (Ghosh, R. 2012).

Review of Literature

A. Review of Concepts

Postnatal Period: It is the most essential and critical period for the mothers and newborn babies as most of the changes occur during this period which determines the well-being of mothers and newborns. On the other hand it can be said that it is a much neglected time as well because of the lack of quality services. Lack of appropriate care in this phase results in significant ill health and even death. This period of time is from birth to 6-8 weeks. The presence of skilled care is less in this phase in comparison to the presence of skilled care before and during childbirth. Most of the child and maternal mortality takes place during this period of 6-8weeks.

Postnatal Care: This includes promoting and supporting early and exclusive breastfeeding, keeping the baby warm, increasing hand washing and providing hygienic umbilical cord and skin care, identifying conditions requiring additional care and counselling on when to take a newborn to a health facility. The major components of the postnatal care for the mother are: i. To prevent complications of the postnatal period (*Puerperal Sepsis, Thrombophlebitis, Secondary Haemorrhage, Urinary Tract Infection*); ii. To provide care for the rapid restoration of the mother to optimum health (*Postnatal Examination, Anaemia, Nutrition, Postnatal Exercises, Psychological and Social*); iii. To check adequacy of breast feeding; iv. To provide family planning; v. To provide basic health education to mother/ family. Similarly, the components of postnatal care for the newborn includes: i. Establishment and maintenance of cardio-respiratory functions; ii. Maintenance of body temperature; iii. Avoidance of infection; iv. Establishment of satisfactory feeding regimen and vi. Early detection and treatment of congenital and acquired disorders, especially infections,disability, etc. (Park. K, 2015).

Utilization: Utilization is the extent of usage of services for the postnatal care of the mother and the child. If the use of the services is done properly by the Santal women then the MMR and the IMR along with the child morbidity can be kept in control. The utility of the postnatal care starts just from the birth of the child for both the mother and child. This is the time when both the new born and the mother have the highest chance of death or morbidity. When both the mother and the new born are able to avail the services of postnatal care comprehensively then it can be said that the utilization among the Santal women is very high, if few of the services are availed by them then it can be said that the services are utilized partially and if none of the services are availed by the Santal women then it can be said that the services are not at all utilized by them.

Factors Influencing: The utilization of postnatal care among the Santal women depends on multiple factors like *biological* (Birth weight, age of the mother, birth order, birth spacing, multiple births, family size, high fertility), *socio-cultural* (breast feeding, religion/caste, antenatal care, use, region, early marriage, sex of the child, quality of mothering, maternal education, quality of health care, brutal habits and customs, Indigenous 'dai', sanitation problem, awareness about PNC services) *economic factors* (occupation, household wealth status, monthly savings), *structural-administrative* (distance to health facilities, lack of trained health workers, lack of health facilities in the village, transportation, unavailability, inaccessibility or low quality of health care services, place of delivery, distance to health facility) factors (Park. K, 2015; Somefun.O.D. and Ibisomi. L, 2016) All the above mentioned factors play vital role for the women and the new born to access and avail the postnatal care services.

B. Scheduled Tribes, Santals and Health Status

The term scheduled tribes refer to various aboriginal ethnic minorities who are concentrated in their traditional lands in different parts of India. As members of the scheduled tribes have distinctive social identities and face different forms of social and economic discrimination. Even within a particular tribal entity, differences in dialect, health practices, unique customs, values and traditions are apparent (Naik et al. 2005).

The tribal population of the country, as per 2011 census, is 10.43 crore, constituting 8.6% of the total population. There are 89.97% of them live in rural areas and 10.03% in urban areas. The decadal population growth of the tribal's from Census 2001 to 2011 has been 23.66% against the 17.69% of the entire population. According to Bagchi (1981), the tribal children have higher rates of morbidity. This tribes are found to be socially and economically deprived (Saha and Saha, 1998) and their diets appear to be nutritionally deficient (Moitra and Chowdhury, 1991; Roy et al., 1982). Women and men from Scheduled Tribes have poor diet particularly deficient in fruits and milk or curd in comparison to the non ST people. It is mostly because of their lifestyle as well as their socio-economic condition (Statistical Profile of Scheduled Tribes in India, 2013).

The government has taken multiple steps to uplift the health condition of the nation, specifically for the rural areas. The National Rural Health Mission (NRHM) was introduced in the year 2005, with the focus to strengthen the rural health infrastructure including physical infrastructure and buildings, manpower and other facilities with special focus on 18 states. Now, there is National Health Mission (NHM) under which National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM) are working throughout the country. Especially NRHM has a great role to improve health situation in the tribal area.

According to Statistical Profile of Scheduled Tribes in India 2013, in spite of the efforts of the government, tribal areas continue to suffer from poor maternal and child health services and ineffective coverage under national health and nutrition programmes. Research and data available through surveys have found that infrastructures like Sub-Centres, Community Health Centres (CHCs), Public Health Centres (PHCs) and others are less than required in the tribal areas.

According to the NFHS-4 data, the IMR of West Bengal is 27 but the gap between the urban and rural is high. In urban areas the IMR is 16 and in rural areas it is 32. The IMR of a community becomes high because of certain specific pushing factors. Those factors also influence the child morbidity of that particular community. NFHS-I, II and III data show trends of deteriorating health indicators and socioeconomic status of the tribal population in comparison to national statistics. According to the Census 2011, the tribal community of India is mostly (89.97%) located in the rural areas. Thus it can be said that most of the tribal in West Bengal are also located in rural areas, and if the IMR is high in rural Bengal then the probability of mother and child mortality will also be high and low nutritional status.

In West Bengal the major tribal group is the Santal. Santal is the third largest tribe in India, and the most resilient tribe in eastern India (http://tribesindia.com). According to Census 2011, the total population of Santal in West Bengal is 25,12,331 (Male- 12,48,370 Female- 12,63,961). In West Bengal, Santals are spread over in vast areas of Paschim Medinipur, Bankura and Purulia (Bagchi, 1994). They are also concentrated in the districts of Hooghly, Bardhaman and Birbhum. Santals live in the remote areas and are also characterized by poverty, illiteracy and nutritional problems. Lack of awareness about various diseases is highly prevalent among the santals.

According to Statistical Profile of Scheduled Tribes in India (2013), throughout the country only 49.9% of tribal children (0-71 months) are receiving any services from AWC and 33.1% tribal children (0-71 months) are receiving immunization services from AWC. The report shows that specifically in the tribal region of West Bengal there is a high crisis of infrastructure, manpower as well as the facilities which were supposed to be given to them. Throughout the country the maximum shortfall of health workers is in West Bengal, which is 3160 in exact. There is a short fall of 2762 ANMs, 167 Doctors, 66 out of 78 required Paediatrics specifically in the tribal area of West Bengal.

It is clear from the above discussion that poor socio-economic condition, poor nutritional status, lifestyles, poor accessibility of government health services, poor services in AWC,

poor health infrastructures, etc affect the health status of Santals and particularly Santal children and women are the worst sufferer in West Bengal. In this connection, several studies can be cited here. For instance, Bagchi (1981) and Ghosh (2006) mention that health status of Santal children in West Bengal remains unreported; Bagchi, et.al. (1994) and Rao and Vijay (2006) state that nutritional status of Santal children has not been investigated elaborately excepting few studies.

With the available evidence of poor nutritional status and poor socio economic condition in the Santal populated area it can be said that the chance of utilization of postnatal care services among the Santal women will be less.

C. Review of Previous Studies

Postnatal Care among the Aboriginal / Indigenous People: A Global View

Dhakal, S et.al (2007), conducted a study in rural Nepal among the women to access the utilization of postnatal care among them. According to the study utilisation of postnatal care can be a beneficial tool to decrease the infant and maternal mortality and morbidity. Further the study has come up with results that the proportion of women who had received postnatal care after delivery was low (34%). Less than one in five women (19%) received care within 48 hours of giving birth. Women in one village had less access to postnatal care than women in the neighbouring one. Lack of awareness was the main barrier to the utilisation of postnatal care. According to this study the factors which distinctly associated with the utilization of postnatal care services are occupation and ethnicity, the number of pregnancies and children and the husband's socio-economic status, occupation and education.

Mrisho, M et.al (2009), in a study conducted in rural Tanzania to explore the use of antenatal and postnatal care and perspectives and experiences of women and health care providers have stated that the women had positive perspective regarding the antenatal and postnatal care. Though, the reason for taking the benefits of antenatal care lately was to avoid too many visits to the clinic. Other reasons include encountering wild animals on the way to the clinic as well as lack of money, fear of caesarean section. Despite the perceived benefits of postnatal care for children, there was a total lack of postnatal care for the mothers. Shortages of staff, equipment and supplies were common complaints in the community.

Tesfahun, F et.al (2014) have done a study in the Gondar Zuria District, Ethiopia to explore the knowledge, perception and utilization of postnatal care among the mothers. The results which came up were very significant and have critically examined the whole situation from multiple dimensions. The study states that the majority of the women (84.39 %) were aware and considered PNC necessary (74.27 %); however, only66.83 % of women obtained PNC. The most frequent reasons for not obtaining PNC were lack of time (30.47 %), long distance to a provider (19.25 %), lack of guardians for children care (16.07 %), and lack of service (8.60 %). Based on the multivariate analysis, place of residence (AOR 2.68; 95 % CI 1.45–

4.98), distance from a health institution (AOR 2.21; 95 % CI 1.39–3.51), antenatal care visit (AOR 2.60; 95 % CI 1.40–5.06), and having decision making authority for utilization (AOR 1.86; 95 % CI 1.30–2.65) were factors found to be significantly associated with PNC utilization. Mothers in the study area had a high level of awareness and perception about the necessity of PNC. Urban women and those who displayed higher levels of autonomy were more likely to use postnatal health services.

Chen, L. et.al (2014), studied the coverage, quality of and barriers to postnatal care in rural Hebei, China. Out of 1442 (90% of surveyed caregivers) women only 8% received a timely postnatal home visit (within one week after delivery) and 24% of women received postnatal care within 42 days after delivery. Among the receivers of postnatal cares services only 37% received counselling or guidance on infant feeding and 32% on cord care. 24% of women reported that the service provider checked jaundice of their newborns and 18% were consulted on danger signs and thermal care of their newborns. Among the mothers who did not seek postnatal care services 65% did not knew about postnatal care and 24% of them thought it was unnecessary. Among the findings essential ones are staff shortages and inconvenient transportation limited maternal and child healthcare workers in reaching out to women at home, inadequate in-service training and more training on postnatal care, hands-on practice, and supervision were needed.

In all the above mentioned studies there are few common aspects that all the studies focus directly on the aspects like utilization of postnatal care services among, all the studies have been done in the rural areas and specially with the women of marginalized group of each of the country. In case of results as well the trend is almost similar which low utilization of postnatal care is and the various aspects which are actually affecting the usage is same in all the different regions. It can be understood from the studies that there is a gap between the usage of postnatal care services between the rural and the urban areas. In the rural area the usage is less and in the urban areas the usage is high and that is because of various resources which are available in the urban areas. The situation is similar in India. According to the NFHS4 data the postnatal care received in the two days of birth in the urban areas (68.5) is higher than the rural (58.1) areas.

Utilization of Postnatal Care among the Tribes in India

It is well established that better post partum health care practices reduce neonatal and maternal mortality and morbidity to a large extent, and safe delivery practices like clean cord care (cutting the umbilical cord with sterilized instrument and tying it with a thread), thermal care (drying and wrapping the newborn immediately after delivery and delaying the newborn bath for at least 6 hours or for several days to reduce the hypothermia risk) and initiating breastfeeding within the very first hour after birth are the main factors for reduction of neonatal and maternal mortality (Darmstadt GL, et.al., 2005; Awasthi S, et,al., 2008).

Lack of availability of data on postnatal care services in the Santal region of West Bengal may be the reason for not having much research work on this particular issue. But to rationalize the study, some studies dealing with other indicators of proper utilization of postnatal care such as underweight, micronutrient deficiency, stunted, wasted, and low nutritional status have been reviewed.

Rao, V. G. et al (2005) in a cross sectional study on under nutrition & childhood morbidities among Gond preschool children in Madhya Pradesh came up with the findings that more than 60 per cent children were of underweight and micronutrient deficiency disorders (anaemia and vitamin A deficiency). Unhygienic personal habits and adverse cultural practices relating to child rearing, breast-feeding and weaning were also prevalent among them. The study also revealed the widespread prevalence of under nutrition among pre-school Gond children and highlights a need for an integrated approach towards improving the child health as well as nutritional status in that area.

S. Bisai, K. Bose, and A. Ghosh (2008) conducted a study in one village of Paschim Mednipur District of West Bengal to evaluate the prevalence of malnutrition among Lodha tribe children. The study was cross sectional study covering 165 children aged 1-14 years. The result showed that there is prevalence of underweight, stunting and wasting was 33.9%, 26.1% and 19.4 %, respectively. Of these, 9.1%, 9.7% and 3.6% children were found to be severely underweight, stunted and wasted. One of the very significant results of the study is the prevalence of underweight and stunting is higher among the pre-school children in comparison with the school going children. There is an urgent need for appropriate steps to be taken to improve nutritional status of children in this ethnic group.

Chowdhury, Chakraborty and Ghosh (2008), carried out a study to determine the prevalence of undernutrition among the Santal children of Puruliya district of West Bengal. There were 442 Santal children (216 boys and 226 girls) aged 5-12 years were taken from randomly selected schools of Balarampur and Baghmundi areas of Puruliya. Nutritional status was analyzed by Z-score values according to the height-for-age, weight-for-age and weight-for-height reference data of National Centre for Health Statistics (NCHS). The prevalence stunting (17.9%), underweight (33.7%) and wasting (29.4%) has been observed. Severe stunting, underweight and wasting were found in 4.98%, 7.92% and 9.51% of Santal children, respectively. In girls, prevalence of stunting (21.7%) and wasting (35.8%) was higher in comparison to boys (13.8% stunting and 22.7% wasting).

Chakraborty, Dutta Chowdhury, Dutta and Ghosh (2008) in a comparative study of physical growth and nutritional status of Santal children of Ghatsila in Jharkhand and Santal children of Bolpur in West Bengal shows that the growth pattern of height, weight, BMI and mid-upper arm circumference was determined. It was observed that growth pattern of Santal boys or girls are similar between Ghatsila and Bolpur. However, the growth curves of height remained at lower level in boys (10th percentile) and girls (5th percentile) in both the regions compared to NCHS reference. Prevalence of undernutrition, at very high rate and the poor growth was also evident in Santal children of two regions by lower percentile value of

weight-for-age. But the percentile of BMI-for-age was higher in Santal children of Bolpur (both boys and girls at 25th percentile) compared to that of Ghatsila (both boys and girls at 5th percentile). The percentage of severe stunting was higher in Santal girls of Bolpur (38.09%) than that of Ghatsila (5.18%). In Santal boys, the severe undernutrition in terms of BMI was higher in Ghatsila (70.77%) compared to that of Bolpur (45.24%). The severe underweight and stunting were higher in Santal girls of Bolpur compared to the boys of same region.

A longitudinal study was conducted by Sarkar, Samanta, Sinha, Samanta, Das and Bose (2010) among the Santal and Non Santal infants and children of Kankabati Gram Panchayat, West Bengal. The study focused to compare the growth in weight of the Santal and the non Santal infant and children. 48 boys and 51 girls were studied for 24 months and some specific differences had been observed. They observed that the non Santal children were heavier that the Santal children and the existence of significant ethnic differences in mean weight at all ages studied except at birth. At the end of the report they also mentioned that there is a need of much more in depth study including larger sample size focusing the socio-economic and demographic factors of the Santals for critical insight.

Ghosh and Sarkar (2013), in their empirical study on prevalence of under nutrition among Santal children of Birbhum District, West Bengal, India found the prevalence of stunting (47.8%), underweight (31.1%) and thinness (29.6%). No significant sex differences in the prevalence of underweight and thinness but the prevalence of stunting was significantly higher among the girls. Overall prevalence of moderate stunting, underweight and thinness was 23.7%, 26.1% and 18.3%, respectively.

SamiranBisai (2014), in a study assessed the overall nutritional status of Santal tribal preschool children of Paschim Medinipur district, West Bengal, India. The study was cross sectional in nature comprising 299 respondents (boys=153, girls=146). The study reveals that Santal preschool children age between 0-5 years have the prevalence of underweight, stunting and wasting. The overall prevalence of underweight was 65.2%, out of, 54.2% and 11.0% children are found to be moderate and severe underweight. It is found that the severe underweight was significantly higher among girls than boys. The girls had 2.3 fold greater risk of being severely underweight. Overall the prevalence of stunting was 54.2%. Among them, 31.4% and 22.7% children were experiencing moderate and severe stunting. Moreover, the overall prevalence of wasting was 20.1%, out of, 17.4% and 2.7% children were found to be moderate and severe wasting.

In brief, efforts have been made to review previous studies pertaining to child health among the Santals in West Bengal. There are very few studies available in the area of postnatal care services among Santal women. Out of seven studies, five studies are related to Santals and the remaining two are pertaining to Gond and Lodha. Again, five studies are conducted in West Bengal and the remaining two are from outside of West Bengal. It has been observed that most of the studies have focused on nutritional aspects and ignoring other aspects like postnatal care services which actually works in favour of decreasing the child and maternal

mortality and morbidity. According to Dhakal, S et.al (2007), postnatal care is an effective tool for reducing infant and maternal mortality and morbidity. In West Bengal there is lack of studies in the area of utilization of postnatal care services and the kind of vital role which is played by it for fighting with maternal and child health concerns.

Rationale

There are several programmes in India pertaining to health care system yet the maternal and neonatal mortality rates remain high. The constant process of urbanization and the multi dimensional push and pull factors makes the Santals victim of rising privatized health care system. The lack of availability and accessibility of government services makes the target population more vulnerable.

The postpartum period is a very vital period for the new born and the mother as well. This is the time when both the mother and new born are at high risk of morbidity and mortality. But according to various studies done by WHO, postnatal care acts as a vital tool for decreasing the mortality and morbidity rates. It can be seen from the NFHS-4 data that the IMR and the MMR of West Bengal have lessened down though there is a gap between the rural and the urban areas. The rural (32 IMR) areas have almost double the IMR than that of the urban (16 IMR) areas. According to the previous studies this gap is present because of lack of resources, lack of awareness, various socio-cultural practices, etc in the rural areas as it falls in remote zones.As the tribal stay in the remote areas, in most of the studies, it has been seen that postnatal care services become inaccessible because of various socio-economic and cultural aspects which are very vibrant among the Santal community of West Bengal.

There are many studies on antenatal care and skilled delivery at birth but very few studies have been conducted on postnatal care. Thus a gap remains to be filled and a need is there to study the utilization of postnatal care services provided by the government and the non-profit organization and its influencing factors among the Santal women of West Bengal. The study will try to break through the systematic process of deprivation with a new intervention strategy in the context of mother and child health. Thus, altogether this research will have an implication for policy making.

Aim and Objectives

Aim: In the due course of globalization and modernization the tribal of India are getting marginalized in the field of education, livelihood as well as health. In the contemporary situation the lack of resources in the tribal region is pushing the tribal to migrate from the rural to the urban and thus they are falling in the trap of such transition where they are neither able to practice their traditional methods of healthcare nor they are able to access the modernized health facilities provided by the government or the non-profit organization. This creates a crisis situation for the tribal people. Thus this study aims to explore the utilization of the health services for postnatal care among the Santal women and come up with measures to improve the health of mother and child in the tribal region of West Bengal.

Specific Objectives:

i. To understand the traditional methods of postnatal care among the Santals in West Bengal.
ii. To understand in detail the utilization of the postnatal care services provided by the government and the non-profit organization in the area under study.
iii. To find out and study in detail the factors influencing utilization of postnatal care services among the Santal women in rural West Bengal.
iv. To suggest measures in order to improve the utilization of postnatal care services among the Santal Women in rural West Bengal.

Research Questions

i. What are the prevalenttraditional methods of postnatal care among the Santals in rural West Bengal?
ii. What postnatal care services are provided by the government and the non-profit organization in the area under study and how they are utilized by the Santal women of rural West Bengal?
iii. What are the various socio-economic, administrative and cultural factors which influence theutilization of postnatal care among the Santals in rural West Bengal?
iv. What administrative and policy level measures can be suggested to develop the usage of postnatal care among the Santals of rural West Bengal? What specific roles can be performed by the professional social workers in the context of social science, drafting policy, and for health and ground level data collection?

Methodology

In West Bengal, there are 41 Scheduled tribes. Among them, Santals are more who constitute 51.8%. The total population of Santals in West Bengal is 25, 12, 331 (Census, 2011).

Research Design:This study will be using mixed method as it will be beneficial for the study to have both the quantitative and qualitative aspects.

Types and sources of data required:Both primary and secondary data will be used for the study. For collecting the primary data focus group discussion with new mothers, in depth interview with service providers and interview schedule with new mothers will be used and for collecting secondary data relevant documents will be reviewed.

Tools for Data Collection:Semi structured interview schedule will be used for taking the response from the 100new mothers from each zone and interview schedule will be conducted with five service providers from each zone. Focus Group Discussion will be done with new mothers from each block. One case study will be done from each zone.

Tools, Sources of Data and Objective at a Glance

Sl. No.	Objective	Source of Data	Respondents	Tool
1.	To understand the traditional methods of postnatal care among the Santals in West Bengal.	Primary Data	The new mothers and the service providers	FGD and Interview schedule And Case study
2.	To understand in detail the utilization of the postnatal care services provided by the government and the NGOs in the area under study.	Primary Data And Secondary Data	The new mothers and the service providers. Review of related documents.	Interview schedule And FGD
3.	To find out and study in detail the factors influencing utilization of postnatal care services among the Santal women in rural West Bengal.	Primary Data	The new mothers and the service providers	FGD, interview schedule And Case study
4.	To suggest measures in order to improve the utilization of postnatal care services among the Santal Women in rural West Bengal.	Primary Data And Secondary Data	Data collected from the present study. Review of related documents.	Analysis and interpretation of the data collected

1. ***Sampling***
    a. Universe: Total number of new mothers among the Santals is the universe for the study, but the specific data is not available in the government reports.Thus, the total number of new mothers each year had been calculated using the birth rate (16 as per Census 2011) of West Bengal and the total population of Santals (25, 12, 331 as per Census, 2011). of West Bengal. After the calculation, total number of new mothers among the Santals is 4,197 and therefore this figure will be considered as the universe of the study.
    b. Sample Size: Using the total number of calculated new mothers (4,197) the sample size is been calculated using sample size calculator with 5 confidence interval and 95% confidence level. The final sample size is 381.19 extra samples will be considered for the study making the total number of new mother 400. IN addition 20 service providers will be chosen along with 400 new mothers.
    c. Sampling Technique:Multistage sampling technique will be used to select the study participants. In West Bengal Santals mostly reside in 8 districts namely Birbhum, Hoogly, Bardhawan, Purulia, Mednipur, Bankura, Paschim Mednipur and PurbaMednipur. These 8 districts will be clubbed together in a pair of 2 to form 4 zones. From each zone 100 women will be engaged for the study. In the 1^{st} stage of sampling after arranging the names of the blocks in one particular zone systematic random sampling will be used to select 2 blocks from 1 zone. From each block 50 women will be engaged. In the 2^{nd} stage again systematic random sampling will be applied to select villages from an alphabetically arranged name list. In the 3^{rd} stage of sampling Santal women will be identified on the basis of the fixed criteria with the help of ASHA workers, ANM and Anganwadi workers.From each block two or more villages will be covered to meet the target of the study.

    d. Criteria for Selecting Respondents: The study population will comprise of married Santal women in the reproductive age group (15–49 years old), residing in Santal villages, who had a live baby in between 12 to 24 months old.

Proposed Chapters

Chapter 1.....Introduction
Chapter 2.....Review of Literature
Chapter 3.....Methodology
Chapter 4.....Profile of the Respondents
Chapter 5.....Traditional Practice for Postnatal Care among Santals
Chapter 6.....Utilization of Postnatal Care Services Provided by Government and Non-Profit Organizations (NPOs).
Chapter 7……..Factors Influencing Postnatal Care Services among Santals
Chapter 8.....Discussion and Conclusions

Ethical Concerns

1. The data which will be collected for the present study will be kept confidential.
2. The participants will be engaged in the study with their full consent and permission after informing and explaining about the study.

Reference

Agarwal, D. K., Agarwal, K.N., Upadhyay, S.K., Mittal, R., and Rai, S. (1992), Physical and sexual growth pattern of affluent Indian children from 5 to 18 years of age. *Indian Pediatrics,* 29(10).

Awasthi, S., Verma, T., Kotecha, P.V., Venkatesh, V., Joshi, V. and Roy S. (2008), Prevalence and risk factors associated with worm infestation in pre-school children (6-23 months) in selected blocks of Uttar Pradesh and Jharkhand, India. *Indian Journal Medical Science*, 62(12), 484-491.

Bagchi, T. (1994). *'Profile of some Indian tribes. 1st ed'.*PunthiPustak: Calcutta.

—. (1981).'*Towards a better implementation of ongoing nutritional programme: A case study from a tribal area of W. Bengal'*. Vanyajati.

Bisai, S., Bose, K. and Ghosh, A. (2008), Nutritional Status of Lodha Children in a Village of Paschim Medinipur District, West Bengal,*Indian Journal of Public Health*, 52(4), 203-206.

Bisai, S. (2014), Prevalence of Undernutrition among Santal tribal Preschool Children of Paschim Medinipur District, West Bengal, India. *International Journal of Pediatric*, 2(4), 347-354.

Black, R.E., Morris, S.S. and Bryce, J. (2003). 'Where and why are 10 million children dying every year?',*Lancet.* 361: 2226-2234.

Bose, S. K. and Chakraborty, F. (2005), Anthropometric characteristics and nutritional status based on body mass index of adult Bathudis: a tribal population of Keonjhar District, Orissa.*Asia Pacific Journal Clinical Nutrition*, 14 (1), 80-82.

Chatterjee, S. S. and Mandal, A. (1991), Physical growth pattern of girls (9-17 years) from rural West Bengal.*Indian Journal of Medical Research*, 94, 172-191.

Chen. L, Qiong.W, Velthoven. H, V,Shuyi. Y, Zhang, Ye L, Wei. W, Xiaozhen. D and Ting H. (2014), Coverage, quality of and barriers to postnatal care in rural Hebei, China: A mixed method study. *BMC Pregnancy and Childbirth*, 14(1).
http://www.biomedcentral.com/1471-2393/14/31

Chakraborty, U., Dutta Chowdhury, S., Dutta, G., and Ghosh, T. (2008), A Comparative Study of Physical Growth and Nutritional Status in Santal Children of Ghatsila and Bolpur. *Tribes and Tribals*, 2, 79-86

Chopra, M., Campbell, H. and Rudan, I. (2012), Understanding the determinants of the complex interplay between cost-effectiveness and equitable impact in maternal and child mortality reduction. *Journal of Global Health*, 2(1).

Chowdhury, S. D., Chakraborty, T And Ghosh, T. (2008), Prevalence of Undernutrition in Santal Children of Puruliya District, West Bengal. *Indian Pediatrics*, 45(1), 43-46.

Darmstadt, G.L., Bhutta, Z.A., Cousens, S., Adam, T., Walker, N., and de Bernis, L. (2005). 'Neonatal Survival Steering Team. Evidencebased, cost-effective interventions: how many newbornbabies can we save?'. *Lancet*. 365:977-988.

Dhakal, S., Glyn N Chapman, Simkhada, P.P., Teijlingen, E., Stephens, J. and Raja, A. E. (2007), Utilisation of postnatal care among rural women in Nepal. *BMC Pregnancy and Childbirth*. 7(19).
doi:10.1186/1471-2393-7-19

Dutta, S. C., Chakraborty,T and Ghosh, T. (2008), Prevalence of Undernutrition in Santal Children of Puruliya District, West Bengal.*Indian Pediatrics*, 45.

Freeman, J.V., Christian, P., Khatry, S.K., Adhikari, R.K., LeClerq, S.C., Katz, J., et al. (2005), Evaluation of neonatal verbal autopsy using physician review versus algorithm-based cause-of death assignment in rural Nepal. *Pediatr Perinatal Epidemiol*, 19, 323-331.

Ghosh, A., Chatterjee, D., Bandhopadhaya, R. A., Das Chowdhury, A. (2006), Age and sex variation of body mass index and waist circumference among the Santal children of Jharkhand.*AnthropologischerAnzeiger*, 64(1), 83-89.

Ghosh, J. and Sarkar, A. (2013), Prevalence of undernutrition among Santal children of Birbhum District, West Bengal, India.*Sri Lanka Journal of Child Health*, 42(3), 147–150.

Ghosh, R. (2012), Child mortality in India: a complex situation, *World Journal of Pediatrics*, 8(1), 11–18.

Government of India. (2011). Census 2011, Ministry of Home Affairs, New Delhi: India

Government of India. (2013). *Statistical Profile of Scheduled Tribes in India. Ministry of Tribal Affairs Statistics*. New Delhi: India.

Government of India. (2005).*National Rural Health Mission*. Ministry of Health & Family Welfare.New Delhi: India.

Government of India. (2001). *India, Census of. T 00-005: total population, population of schedule castes and schedule tribes and their proportions to the total population*. New Delhi: India.

Government of India. (2006). *National Family Health Survey (NFHS-3), 2005-06*. International Institute of Population Sciences and Macro International. IIPS. Mumbai: India.

Government of India. (2001). *National Family Health Survey-4*, 1989-1999. International Institute for Population Sciences and ORC-Macro. . Mumbai: India.

Jat, T.R., Ng, N. and San, M. (2011), Factors affecting the use of maternal health services in Madhya Pradesh state of India: a multilevel analysis. *International Journal for Equity in Health*, 10(1).

MacArthur, C., Winter, H.R., Bick, L.R.J., Lancashire, K.H., Braunholtz, D.A., Henderson, C., Belfield, C., Gee, H. (2003), Redesigning postnatal care: a randomised controlled trial of protocol-based midwifery-led care focused on individual women's physical and psychological health needs. *Health Technol Assess*, 7:37.

Mitra, M. et.al. (2002), Growth patterns of the Kamaras- A primitive tribe of Chhattisgarh, India.*Collegium Antropologicum*, 26(2), 485-99.

Moitra, A. and Choudhary, R. P. (1991), Food habits and anthropometry of two tribes of Rajmahal hills, Bihar, *Indian Journal of Medical Research*, 94, 64-70.

Moran, A. C., Kerber, K., Sitrin, D., Guenther, Y., Morrissey, C.S., Newby, H., Fishel, J., Yoder. P.S., Hill, Z., Lawn, JE. (2013), Measuring coverage in MNCH: indicators for global tracking of newborn care, *PLoS Medicine Journal*, 2013, 10(5).

Mrisho. N., Obrist, B., Schellenberg, J. A., Haws, Z., Mushi, A. K., Hassan, M.H., Tanner, M. and Schellenberg, D.(2009), The use of antenatal and postnatal care: perspectives and experiences of women and health care providers in rural southern Tanzania,*BMC Pregnancy and Childbirth*, 9(10), 1-12.
doi:10.1186/1471-2393-9-10

Naik, E., Karpur, A., Taylor, R., Ramaswami, B., Ramachandra, S., Balasubramaniam, B. et al., (2005), Rural Indian tribal communities: An emerging high-risk group for HIV/AIDS,*BMC International Health and Human Rights*, 5 (1).

Park, J. E. (2015). '*Park's Textbook of preventive and Social Medicine'*. BanarsidasBhanot Publishers. Jabalpur: India.

Rao, T. V. R. K. and Tuhina, V. (2006), Malnutrition and anemia in tribal pediatric population of Purnia district (Bihar), *Indian Pediatrics*, 43(2), 181-182.

Rao, V. G., Yadav, R., Dolla, C.K., Kumar, S., Bhondeley, M.K. and Ukey, M. (2005), Undernutrition & Childhood Morbidities among Tribal Preschool Children.*Indian Journal Medical Research,* 122(1),43-47.

Regassa, N. (2011), Antenatal and postnatal care service utilization in Southern Ethiopia: a population-based study. *African Health Sciences,* 11(3), 390–397.

Roy, J.K., Bhattacharya, K.K. and Biswas, S.K. (1982), Diet and nutritional anthropometry of Santals of Puruliya district.*Bulletin Anthropological Survey of India*.

Saha, B. K. andSaha, U. (1998), An overview of the socio-economic and demographic transition among the Santal: a census analysis.*Man in India,*78(1-2), 87-101.

Sarkar, A., Samanta, M., Sinha, K., Samanta, N., Sukla, P. D., and Bose, K. (2010), A Longitudinal Study of Weight Gain among Santals and Non-Santal Infants of Kankabati Gram Panchayat, West Bengal, India. *Indian Journal of Biological Sciences*, 16. 29-33.

Somefun, O.D. and Ibisomi, L. (2016), Determinants of postnatal care non-utilization among women in Nigeria. *BMC Research Notes,* 9.

Tesfahun, F., Worku, W., Mazengiya, F., and Kifle, M. (2014), Knowledge, Perception and Utilization of Postnatal Care of Mothers in Gondar Zuria District, Ethiopia: A Cross-Sectional Study. *Maternal and Child Health Journal,* 18(10), 2341–2351.
DOI 10.1007/s10995-014-1474-3

UNICEF, 2013, The UN Inter-agency Group for Child Mortality Estimation: Levels and trends in child mortality: report 2013. New York: USA

Wang, S.L. (2006), Preliminary study on development a puerperal maternal family care model. *Prac J of Medicine*, 22(14), 1694–1695.

World Health Organization. 2010. *WHO Technical Consultation on Postpartum and Postnatal Care: WHO.* Geneva, Switzerland: WHO Document Production Services.

Xiong, W. He, J.Y. and Xiao, J.C.(2006), Early psychological intervention to improve maternal postpartum depression, *Journal of Nervous and Mental Disease*, 32(2), 149-178.

http://tribesindia.com